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JUN 28 1932
BUREAU OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 4 1932

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REPORT FOR THE WEEK ENDING JUNE 4, 1932.

HAVRE:

Growing conditions during the week were excellent. Rain on three successive days, beginning on the 29th, amounted to 1.13 inches. The range of temperatures was low with a minimum of 45 and a maximum of 77. Evaporation was slightly less than the average.

Comparatively cool weather following the rain has stimulated the growth of all small grains. There is much more tillering in spring grains than for several years. Winter rye is headed and spring rye is beginning to shoot. Plowing for fallow is completed. Roadways are being lined out ready to cultivate. Corn in the commercial fields is being given the first cultivation.

The pale western cutworms are causing some damage. They are coming in on the edges of a few grain plots and are also taking an occasional corn plant but this may not be serious enough to interfere with stands. For the past week there has been a heavy flight of small moths, apparently sugar-beet web worms.

Ranges and hay meadows are in excellent condition. Alfalfa in some fields is showing a little bud. Native grass meadows will yield more than for several years.

JUDITH BASIN:

Rains, totalling .74 inch, the forepart of the week have improved crop prospects to a great extent. The rains were accompanied by some hail but most crops were too small to be injured seriously. Alfalfa seems to have been damaged by the frosts of the previous week. Growth has been very slow and many of the upper leaves have turned white.

Pale Western cutworms are doing serious damage in many fields of the Judith Basin and apparently their ravages will continue through this month. To date the damage done on the station has been limited to a few barley plots.

The Annual Judith Basin Farmers' Picnic will be held at the station on July 16.

Maximum temperature, 78; minimum, 39; precipitation, .74 inch.

HUNTLEY:

A light shower early in the week followed by warm weather induced a good growth in all crops. Spring sown grains and corn look well, but winter wheat is beginning to burn in spots. The burning is especially noticeable in the winter wheat on manured fallow, the entire plot of which now has a brownish cast. Farmers report winter wheat to be drying up in districts not favored with showers during the last two weeks. The first blooms are appearing on alfalfa and the first cutting of this crop promises to be a heavy one.

The total precipitation for May as measured at the station was 1.81 inches, which was .23 inch below the average. Neighboring districts report the May precipitation to be above the average, due to local showers, some of which were not received at the station.

Field work has consisted of planting sorgo, Sudan grass, soybeans and late garden vegetables; cultivating roads, alleys and fall-plowed fallow plots; and plowing miscellaneous tracts for fallow.

Maximum temperature, 80; minimum, 38; precipitation, .15 inch.

SHERIDAN:

Weather remained fairly cool over the entire week until the 3rd, with some cloudiness but with no rain of consequence. Growth of crops continued good.

Tomato plants received from the Cheyenne Station were planted the first of the week. Roadways were lined. Late pigs not included in the pasture work were vaccinated. All seeding was completed except for late seedings of flax, corn, and potatoes. The two first seedings of flax in the date of seeding test were almost entirely destroyed by cutworms and were reseeded.

The varieties of flax and the safflower, immediately adjoining the dates of seeding flax, and the flax in the rotations, have not been injured to any extent yet. Corn on some of the spring-plowed plots that worked up in a lumpy condition emerged with a very poor stand, the ground drying out largely to the depth planted. Winter wheat and early seedings of Vaughn barley are in the boot.

Maximum temperature, 80; minimum, 38; precipitation, .11 inch.

DICKINSON:

Showers early in the week, though less here than in much of the surrounding area, were of great benefit to crops. Cool weather early in the week caused stooling of grains so that stands generally appear thicker than before. Warmer weather at the end of the week caused rapid growth of all vegetation.

Cultivation, weeding and miscellaneous planting was done during the week.

Maximum temperature, 79; minimum, 43; precipitation, .73 inch. Precipitation in May amounted to 2.12 inches. During the five months, January to May, the precipitation was 5.81 inches, which is .61 inch above normal.

MANDAN:

Agronomy

Frequent and abundant rains fell during the past week. The soil is now soaked. Prairie sod is soaked to a depth of about 2.5 feet. All crops are making a rapid and heavy growth. The weather remains cool for this time of year.

Plowing for fallow started on June 1 but was delayed on one day because of rain. Millets, Sudan grass, and sorgos were seeded during the latter part of the week.

The total rainfall for May was 3.48 inches, a little over an inch above normal. During the last 10 days of the month 3.19 inches fell. So far in June 1.35 inches of rain have fallen. To May 31, the precipitation is 1.24 inches above normal.

Cooperative Grazing Experiment

Native vegetation has improved markedly since the good rains, and all pastures are in excellent condition for grazing.

The steers made the following gains during the first 15 days of the experiment, as compared with the same period in 1931:

Mandan, continued:

Cooperative Grazing Experiment, continued.

Pasture (acres)	Number of steers	Pounds gain per head. 15 days	1931
100	10	77.0	105.5
70	10	70.0	96.5
50 *	10	72.5	95.0
30	10	74.0	97.5
70 (Rotation)	14	66.4	102.5
28 (Brome)	10	77.0	108.8

* Received about .20 lb. of cotton seed cake per head daily. Cotton seed cake is being tried with one lot for the first time. At the present time they are taking about 1 lb. per head daily. The steer gains for the 15 days in May were near normal.

Professor Thompson, of the North Dakota Agricultural College, was here on May 31, and graded the steers. They run a little higher in grade than the bunch of 1931.

Horticulture

Most of the vegetable planting has now been finished. The selections in the sweetcorn and melon breeding projects were planted on May 18, 19, and 22, respectively. About 320 sweetcorn, 40 watermelon, and 52 muskmelon selections are included this year.

Tomato selections have not been set out yet, due to the freezing and wet weather of the last few days.

Not much damage resulted from the late cold weather. Melons and cucumbers were frozen in spite of covering and were replanted.

Spinach, onions, radishes, and asparagus are giving good yields at the present time.

The showiest thing about the grounds at this time is Spiraea Van Houtte, which is in excellent condition this year.

Arboriculture

The wet weather of the past week has prevented very much field work from being carried on. The hauling of dead wood from the blocks in the main windbreak has been completed.

Hoeing commenced the latter part of the week in nursery fields and in hedges.

Mandan, continued:

Visitors during the week included F. E. Cobb, President, Forestry School, Bottineau, North Dakota, H. L. Walster, Dean, School of Agriculture, and E. J. Thompson, Chairman of Animal Husbandry Department, North Dakota State Agricultural College.

Maximum temperature, 78; minimum, 41; precipitation, 2.70 inches.

ARDMORE:

Normal temperature and wind velocity with but little precipitation characterized the weather for the week.

Small grains were tillering rapidly and some barley is about ready to head. Corn in the fields emerged during the week and showed fair to good stands.

Hay crops made a good growth but showed some need of moisture. Alfalfa will be ready for harvest during the coming week.

Rotation plots, small fields and 20 acres of sorgo were seeded during the week. The preparation of fields for seeding Sudan grass and variety tests of millet and sorgo, was completed.

The steers in the pasture experiment were weighed on June first. The following table gives the gains made during the first 12-day period:

Lot	Average weight-pounds. May 20	June 1	Gain pounds.
80-acre pasture with barley supplement	873.4	903.1	29.7
80-acre pasture	874.7	890.6	15.9
160-acre rotation pasture	878.4	883.8	5.4
20-acre crested wheatgrass pasture	872.5	896.3	23.8
300-acre peserve pasture	875.0	935.0	60.0
Average.	874.8	901.8	27.0

Maximum temperature, 85; minimum, 40; precipitation, .09 inch.

ARCHER:

The weather has been rather cool and threatening with considerable wind and cloudiness. On June 3 the wind was so severe that it seriously damaged some shrubs and blew some leaves and twigs from most of the trees. The precipitation, .24 inch, occurred on three dates; however, the largest amount, .17 inch, fell during June 3.

Archer, continued:

While the week was cool with a maximum of 75 degrees and a minimum of 35 degrees, vegetation made considerable growth. Most of the corn has emerged and so far a good stand of all crops has been secured. The perennial forage crops are not doing so well. Winter rye and crested wheatgrass are heading with a short growth.

Work at the station has consisted of planting potatoes, cabbage, tomatoes and other garden plants. Other garden crops were weeded and thinned. Millets, beans and Sudan grass were seeded in the experimental field and to-day, June 4, Sudan grass is being seeded in Dairy Field No. 5. The final stage of manure hauling is in progress.

Governor Clark, Commissioner of Agriculture, L. T. Oldroyd and Director W. L. Quayle were station visitors during the week.

AKRON:

Two showers since last report have kept the agricultural outlook at this station bright; however, crops do not seem to be responding to the favorable conditions as they should. Further, reports are that these showers are local and that areas in this vicinity are suffering for moisture.

Good progress was made with current work here on the station. Rotation kafir and sorgo plots, the sorgo variety experiment, the grain sorghum variety experiment, the corn for 1933 cereal variety experiments and two acres of Sudan Grass for hog pastures were seeded. Rotation fallow and green manure rye plots are being plowed this week-end. Rye is very uneven in stage of growth, the oldest plants just breaking into head at a height of 15 inches.

Weeds are doing fine and prospects now are for very weedy spring-seeded small grain plots.

Maximum temperature, 83; minimum, 40; precipitation, .52 inch.

NORTH PLATTE:

Rains were quite general over the state the early part of the week. These came as thunderstorms and the rainfall was very unevenly distributed. On the Substation table .92 inch was measured. As much as seven inches were reported from locations not far away.

North Platte, continued:

Milo and sorgo, the last of the crops for the season, were planted June 3. Small grains have revived considerably since the rains but the crop prospect, except on fallow, remains low. Oats and barley are beginning to head at heights of 6 to 12 inches and weeds are making rapid headway.

Rainfall for May was 1.77 inches, and the deficit 1.01 inches. Evaporation was 7.705 inches, which is the highest record for May since the station was established. Wind movement and temperatures were also near the high marks.

COLBY:

Nearly three-fourths of an inch of rain the night of June 3, added to the frequent showers we have been having during the last two weeks, will keep the crops from drying up for a few days. There is not an abundance of moisture even now on ground that has a small grain crop growing on it.

The small grains are all heading very short, even the spring wheat which usually attains a good harvesting height before heading.

The Canada field peas were turned under for green manure on the 2nd. They averaged about 10 inches in height. The soil was loose and barely moist. All the fallow plots were gone over with a duck-foot cultivator, except those that are to be handled in some other way.

It was necessary to replant the feterita plots. Good stands were secured with the milo, kafir and beans. The Sumac sorgo came up to rather spotted stands and some of it was washed under by the rain last night so that it may need to be replanted.

Maximum temperature, 90; minimum, 44; precipitation, .76 inch. Maximum temperature for May, 91; minimum, 30; last killing frost on the 16th. Precipitation for May, 1.46 inches, 46-year average, 2.47 inches. Precipitation, January 1 to May 31, 4.80 inches, 45-year average, 6.36 inches.

GARDEN CITY:

Spring planting of row crops was practically finished on the dry land station the past week. All that is left to plant is cowpeas. Ground was unusually dry, especially on spring-plowed seedbeds. In previous years a surface planter has been used for most of the row crops. This year a surface planter equipped with furrow openers was used. It was possible to place the seed in moist soil in most instances.

Some wheat plots are practical failures and a few will not be harvested. Many farmers are listing up wheat fields for row crops or fallow. Wheat land is practically exhausted of all available moisture. Wheat on fallow will produce some very good yields, the maximum possibilities look good for a yield of probably thirty bushels per acre.

Temperatures the past week have been slightly above normal with more wind than normal, and some cloudy weather the fore part of the week. Friday night, June 3, was received the first rainfall of any value to growing crops since last September, 1.20 inches of rain falling in a slow drizzle during the night. It will be the making of some fields of wheat that have been able to survive the dry weather and are now beginning to head. Another rain of 1.35 inches fell the night of June 4. Neighboring localities report varying amounts of rainfall. At Tribune, Kansas, 80 miles northwest, 7 inches of rain fell in three hours.

Maximum temperature, 95; minimum, 47; precipitation, 1.20 inches up to 8 a.m. June 4.

HAYS:

Weather during the past week has been generally partly cloudy and comparatively cool, with plenty of moisture in the soil for present crop requirements. There have been almost ideal conditions for development of the small grains, especially winter wheat.

Barley, oats, and spring wheat seem to have suffered more from the effects of the drought than was at first believed. Fall-plowed plots have suffered more than spring-plowed plots, apparently because a thicker and heavier growth was made on the former before the drought became serious. The barley is especially short and has extremely short heads on the fall-plowed plots. It is not so thick on the spring plowed plots but straw is taller and the heads much better. On fallow the barley is better but not as good as it generally is on fallow. Oats look much the same as the barley except that the oats are slower and are now only heading with a few heads completely out, while the barley is all headed and the grain forming. Spring wheat is in about the same stage as the oats. Peas are just beginning to bloom. Alfalfa on the one and two-year-old sod plots has been mown and will yield about three-fourths of a ton per acre. All fall and spring plowed plots for corn have been cultivated to destroy another crop of weeds. The corn will be seeded as soon as a planter becomes available, which will be about next Wednesday if rain does not further delay field work.

Maximum temperature, 84; minimum, 52; precipitation, .33 inch.

TUCUMCARI:

Rain and hail June 3, totalling .60 inch, was rather severe on cotton seedlings, but aided other crops and grass land. The surface soil was becoming dry, and planting in moist soil the past few days was difficult. After the torrential precipitation of yesterday it is quite possible some land will bake before seedling emergence. Crops planted a week to ten days ago as a rule have emerged to excellent stands.

Work of the past week included continuance of planting, fence building, cultivation of increase land, cultivation of young alfalfa, and a start toward alfalfa and sweet clover harvest. Two loads of mixed hay were cured and hauled before the rain, but the balance of the crop remains uncut, due to break-down of the mower.

Wheat and rye are turning fast and all plots will produce some grain. Cultural practice is showing very noticeable differences, due to the dry early spring. Heads on late fall plowed plots are very short, and but little stooling occurred. This is similar to the condition of most of the wheat in this area which still survives and will be harvested. Abandonment in this county no doubt runs over 50 per-cent, while the acreage harvested will depend largely on price at harvest and yield indications. Perhaps half of the acreage now left will not be cut unless price or yield prospects improve materially.

Maximum temperature, 90; minimum, 49; precipitation, .62 inch; evaporation, 1.983 inches; wind velocity, 6.1 miles per hour.

DALHART:

This report quite logically should be divided into two parts. This is due to the fact that the week was characterized by two extremes. The first part of the week will be discussed first.

During the first four days of the week the relative humidity probably reached a new low for this country. The surface soil, where not already exhausted of available moisture, continued to dry out. The young seedlings of corn and sorghums suffered for moisture and the question was asked quite frequently as to how long they might stay alive. Grass was becoming dry and parched. It was entirely too dry for seeding of row crops and seeding operations on farms reached a standstill. The only seeding done on the station during the week were the June 1 date-of-planting for sorghums and cotton. An attempt was made to get germination of sorghums by seeding slightly deeper than normal. The rotations were not seeded, nor was anything seeded except the 'dates'. It was felt that it was advisable to wait for a rain.

Dalhart, continued:

The nineteen-month drought was brought to a close with a heavy downpour which lasted for two and one-half hours Friday evening. During this time a total of 3.50 inches of rain fell, most of this during the first hour. Needless to say most of this rain was lost in run-off. Gullies were washed across some of the plots and the June 1 date-of-planting for the sorghums are now apparently hopelessly buried. Rather fortunately, a somewhat cursory examination, as one cannot get near some of the plots, indicates that everything which had emerged was not covered beyond that it can continue to grow. A heavy hail fell for about five minutes but beyond a few down straws in the wheat and rye no damage is noticed. It will easily be the middle of the week before field operations are possible. The large lake just north of the station, where the dam has been constructed for a year and a half, received its first water with this rain. This lake filled up before the rain had ceased, which shows the large amount of immediate run-off.

Maximum temperature, 89; minimum, 42; precipitation, 3.50 inches; wind velocity, 6.7 miles per hour.

BIG SPRING:

Weather conditions during the past week have been favorable for field work since the fields became dry enough to work. A heavy rain Saturday night soaked the fields to such an extent that no planting was possible until Tuesday afternoon. During the month of May 5.17 inches of rain have been received as compared with a normal of 2.67 inches for this month. Only three times in the past 32 years has the rainfall during the month of May exceeded this year's amount. So many heavy rains have caused much replanting of cotton throughout the county.

Planting has occupied the greater part of the time of the station force during the past week. Practically all of the plots in the rotation field were planted. One plot of beans and two of millet are all that remain to be planted in this field. The June 1 variety date of grain and forage sorghums and cotton was planted on that date. Cotton for spacing, the cooperative variety planting, cow pea and soybean varieties, all were replanted. The rains had covered them so deep that they could not get through the heavy crust. Most of the wheat plot were harvested during the week. The kernels were plump and the heads were well filled so that a much better than average yields should be obtained.

Maximum temperature, 88; minimum, 57; precipitation, .82 inch.

LAWTON:

Destructive floods, wind and hail swept across various parts of the State during the past week, but local territory experienced only cloudy, windy, threatening weather and scattered showers.

Cool weather with minimum temperatures of 52 to 70 and maximum temperatures of 64 to 89 were quite favorable to the maturity of small grains and the normal growth of corn and sorghum crops. The moisture received a week ago resulted in improved stands of cotton that was planted about the 10th of May.

Small grain harvest, sorghum thinning, and cultivation kept all labor forces busy throughout the week. A few rotation plots of wheat and oats and the spring barley were cut, as well as more than half of the wheat varieties and nearly all of the winter oats. Spring barley made a growth of 12 to 16 inches and did not produce any grain. The crop was heavily infested with chinch bugs. About 10 acres of oats, that made a growth of 18 to 20 inches, were cut when 35 to 50 per-cent ripe and the crop will be fed in the bundle.

Much of the wheat has sufficient growth of straw to support a yield of 20 to 30 bushels per acre, but the heads are short and light and the yields will likely be quite variable with a comparatively low average.

The total precipitation of 1.19 inches during May was 3.86 inches below normal, and the deficiency since January 1 amounts to 2.20 inches.

The average wind velocity of 7 to 10 miles per hour during the week added to the difficulties of harvest.

WOODWARD:

Over the past eight days there have been 1.86 inches of precipitation. This has come as light, gentle showers, except for one hard driving rain of .94 inch accompanied by scattering hail. This raveled the leaves of corn and killed terminal buds of cotton, but otherwise did little damage.

Wheat for the most part is ripening very rapidly and is filling well. Sorghums planted before the first of June have been slow in growth, as has cotton and corn.

Sour cherries have been harvested over the past two weeks and as usual have made fair crops. Grapes still give promise of heavier yields than usual.

Woodward, continued:

Work of the week has consisted of hoeing, hauling gravel and sand for floor of machine shed, digging ditches for water pipe and planting grass. Maximum temperature, 88; minimum, 51; precipitation, 1.83 inches.

PENDLETON:

Cool weather persists in this section. The highest temperature recorded this season on the station is 84 degrees. Temperatures above eighty have been recorded on only three days this season. This cool weather is fine for the winter wheat, but a few warm days are needed to hasten spring wheat growth.

The chief field work on the station this week has been the cutting of the alfalfa, clover and grass plots. These plots have not been weighed yet. Indications are that yields will be much larger than last year.

The early spring barleys are heading in the cereal nursery. Maximum temperature, 77; minimum, 35; precipitation, for the month of May, 1.29 inches.

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NOTE:

Under date of June 9, 1932, Dr. W. A. Taylor, Chief of Bureau of Plant Industry, writes, as follows:

"I quote below a memorandum which has just been received from Mr. A. Mc. Ashley, Chief of the Division of Purchase, Sales, and Traffic. This is self-explanatory.

'Bureau instructions to the Central Supply Section of this Division to make shipments of supplies direct to field stations should not be drawn to cover nitric, hydrochloric, or sulphuric acid, since the regulations of the Interstate Commerce Commission require packing involving an expense out of all proportion to the value of the commodity. It is suggested that bureaus authorize local purchases of these acids for use of field stations.'

"In accordance with this suggestion, will you kindly arrange with your field men for the purchase of the acids in question in the field."

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JUN 11 1932

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REPORT FOR THE WEEK ENDING JUNE 11, 1932.

HAVRE:

Rain on every day during the past week prevented field work but was in sufficient quantity to materially increase soil moisture. Owing to the cloudy and cool weather growth of some grains was not very rapid but rye and grasses made fair progress.

Mustard is now in bloom. Corn is making some growth and is in condition to make rapid progress when the temperature rises.

In some localities in this section there has been damage from pale western cutworms during the last two weeks. The damage is rather local and in most fields is confined to restricted areas. There is no damage on the station aside from a slight decrease in stands on a few plots.

The total rainfall for the week was 2.98 inches, which brings the June rainfall to .14 inch above normal. The range in temperatures was again very small. The maximum of 76 was recorded on the 4th. The minimum ranged from 46 to 48 for the entire week. On one day the maximum was 52 and on another 53. This makes conditions in this section of the State the most promising they have been in several years.

Louis Vinke, of the Montana Experiment Station, is a visitor at the station to-day, June 11.

JUDITH BASIN:

Timely and abundant rains during the week have removed for a time at least the fear of a recurrence of the drought conditions of the past three cropping seasons. The moisture fell in such a way that it was practically all absorbed by the soil and very little was lost by run-off. South and east of the station the rainfall was of such character as to cause some loss from high water. Crops have made very slow growth during the week but they should make rapid progress with a few days of warm weather. No field work has been possible during the week. Corn planted over two weeks ago has not emerged.

Maximum temperature, 78; minimum, 39; precipitation, 2.95 inches.

HUNTLEY:

Rainy and cloudy weather has prevailed throughout the week. A continuous 24-hour rain amounting to 1.42 inches was received on June 7. This was the heaviest 24-hour rain that has been received since July 24, 1923. The character of the weekly precipication was such that very little run-off occurred. Range pastures and winter wheat, which had begun to feel the need of moisture, are now showing marked improvement.

Field work conducted between showers has consisted of hoeing weeds missed by the cultivators, soil sampling, and cleaning up jobs.
Maximum temperature, 86; minimum, 46; precipitation, 1.90 inches.

SHERIDAN:

Rain the first of the week, with continued cool and cloudy weather since, prevented any field work of any consequence during the entire week. Some of the roadways were worked, but they were still wet. Date seedings of flax and corn were made to-day.

Most of the late-seeded forage crops emerged during the week. Winter wheat and early seedings of Vaughn barley began to head. Alfalfa and sweet clover began to bloom. Cutworms are now working on the flax varieties to some extent, but have not yet done much damage. The foliage of some of the sweet clover is almost completely covered with worms. These worms are being sprayed.

The delay in field work on account of wet ground is allowing weeds to get considerable headway. Growth on some fallow plots is getting rather heavy, but no plowing will be possible for several days.
Maximum temperature, 84; minimum, 41; precipitation, 1.89 inches; precipitation to date for the year is now the heaviest recorded here to the end of June, except in 1927.

DICKINSON:

Two good rains during the week have further improved crop prospects. On the night of June 7 rain amounted to .96 inch, and during the 24-hour period ending June 11, 2.29 inches were recorded. Crop conditions have naturally improved much during the week. Grain stands have thickened up and are now excellent in appearance. Some flax is still being seeded, and with the present water in the soil, the prospect for this flax is good.

Dickinson, continued:

Corn and potatoes on the rotations and most of the other row crops were cultivated.

Alfalfa is beginning to bloom at a height of 12 to 15 inches. Stands are spotted, and the first crop will yield only a fair amount of hay.

Grasses and pastures are in excellent condition. A noticeable amount of Kentucky bluegrass has headed about the locality this year. This grass has gradually increased until there is now ten times as much as there was ten years ago. In low places it has furnished considerable grazing this spring, but is becoming a weed in places by invading alfalfa and other crops.

Fruit trees and ornamentals are making a vigorous growth. Most varieties of plums and apples have a good set of fruit which is developing rapidly.

Director P. F. Trowbridge visited the station for a short time on the evening of June 6.

Maximum temperature, 84; minimum, 47; precipitation, 3.27 inches.

MANDAN:

Agronomy

Field work has been delayed during the past week because of rains.

Plowing for fallow was completed early in the week. Corn in the Main field was given the first cultivation. Plots have been prepared for some late seeding of forage crops.

All crops are making an excellent growth. Crested wheatgrass, bromegrass, and alfalfa are nearly ready to cut.

Mandan, continued:

Cooperative Grazing Experiment

The steers are all doing well on their pastures, and all pastures are furnishing an abundance of feed.

The dam in the reserve pasture is filled to capacity.

Horticulture

Continued rain has delayed field work to some extent, but is encouraging a vigorous growth in the orchards and nursery. The second spray of the season was applied and some hoeing was done during the week. Thinning of plums and apples has been started. Owing to the heavy set of fruit, more thinning than usual will be necessary this year.

Arboriculture

E. J. George, in charge of this project, left the station on the 8th, planning to inspect cooperative tree plants and land prepared for plantings by new cooperators, in western North Dakota and parts of Montana. He expects to return to the station on the 29th or 30th of the month.

He reports he is finding old tree plantings in good shape, and new plantings practically 100 per-cent stand. He is being seriously delayed by the bad condition of the roads.

Visitors at the station for the week included M. J. McGee, Chief, Porto Rico Station, Food and Drug Inspection. (Visiting with his daughter at Fort Lincoln) A. J. Dexter, Agricultural Agent, Northern Pacific Railway, and J. H. Stevens, Agricultural Credit Corporation.

Maximum temperature, 83; minimum, 54; precipitation, 1.72 inches; precipitation, June to date, 3.07 inches.

BELLE FOURCHE: (Report for the week ending June 4, 1932.)

The most outstanding climatic feature of the week was a heavy hail storm on the afternoon of May 30. Approximately two inches of precipitation were received in less than an hour, and the ground was covered with over an inch of hail. This was followed by a heavy rain which continued intermittently during the night, and a total of 2.92 inches precipitation was recorded. The heavy run-off which occurred did considerable damage to various plots through washing of soil and smothering of crops in the lower areas with drifted soil. One plot of wheat was almost completely destroyed, and portions of a number of other plots will have to be reseeded as soon as they dry sufficiently.

Belle Fourche, continued:

All growing crops were injured extensively by the hail but have made a rapid recovery. Early-seeded small grain suffered the greatest permanent damage, from 10 to 25 per cent of the culms being broken over and many of the leaves destroyed. Flax was set back the least of any of the crops and has made a good growth. Corn is recovering rapidly, and satisfactory stands will be obtained on all plots except those planted with a lister. Winter rye is fully headed. Alfalfa seeded early in May failed to come up, and all plots were reseeded the last of the week. Sorgo was planted June 4.

The total precipitation for May was 5.77 inches, which is 2.97 inches above the 24-year normal and third to the greatest on record for May. The total precipitation received to date since January 1 is 9.96 inches, which is over four inches above normal and 1.16 more than was recorded during the entire year of 1931.

Soil samples taken June 2 show that moisture has penetrated to average depths of 17 to 18 inches on plowed, continuously-cropped land, 21 inches on land fallowed in 1931, and 22 to 23 inches on land being fallowed in 1932. The depth of penetration is not more than two inches greater than on May 4, but the first 15 inches of soil on all plots are practically saturated.

Maximum temperature, 82; minimum, 45; precipitation, 2.98 inches.

BELLE FOURCHE:

Moderately cool weather has prevailed throughout most of the week, but the first two days were comparatively warm. Fairly heavy rains were received June 6, 7, and 10, the daily precipitation ranging from .44 inch to .56 inch. As the surface foot of soil was practically saturated considerable run-off occurred, but the rains served to soften the extremely thick heavy soil crust.

A total of 6.76 inches precipitation has been received since May 19, and the frequent rains have permitted only a small amount of work to be done in the field. Plowing of fallow was finally completed the last of the week, and rye was turned under for green manure. All fallow plots were disked before rain again stopped field work.

Belle Fourche, continued:

Flax and all small grain crops have made an unusually rapid growth, but corn has not made much progress. Potatoes are coming up. Alfalfa and sorgo seeded last week are well germinated, and the alfalfa is sufficiently far advanced that it should emerge with good stands on the various plots before a new soil crust forms.

Maximum temperature, 87; minimum, 48; precipitation, 1.50 inches.

ARDMORE:

Showers fell in this section on about every day of the week, but only one rain large enough to be of benefit fell at the field station. This rain was accompanied by hail that damaged grain that had headed, but did little injury to grain in a less advanced stage of growth. Winter rye suffered about 15 per cent damage, and Coast and Vaughn barleys slightly less.

Grains are making seasonable growth. Barley and oats are in the boot. Wheat is making a vigorous growth. All grain crops are getting short of water, but the cool weather during the week prevented drought damage.

Haying operations commenced the first of the week, but the damp weather delayed curing and none of the hay could be stacked until June 9. About fifty acres of alfalfa were cut during the week.

Maximum temperature, 85; minimum, 42; precipitation, .40 inch.

ARCHER:

The fore part of the week was cool and dry. On June 8 a local shower of .17 inch precipitation occurred. On June 9 a hail storm occurred which produced .59 inch of precipitation, and on June 10 another hail storm left a coating of ice three inches deep from which was recorded 1.68 inches of precipitation. The duration of the storm was about 45 minutes. The storm was worse farther east and this morning the country east looks like a snow drift. Following the hail storm a light shower occurred, which raised the total precipitation for the day to 1.70 inches. The total precipitation at the station for the week was 2.46 inches. The maximum temperature was 75 degrees and the minimum was 39 degrees.

Archer, continued:

Before the storms everything was getting dry and now there is scarcely anything to get dry except the grass. However, it is expected that the crops, in most cases, will recover. The trees, except the Northwest poplar and chokecherries, were severely stripped of their leaves.

Work at the station consisted of hoeing weeds from the tree plantings, cleaning yards and lining the plots.

Notwithstanding the hail storm of June 10 there were 104 Four-H Club members and leaders at the station under the leadership of County Agent E. O. Johnson and State Club Leader B. W. Marston.

H. L. Westover, of the Division of Forage Crops, visited the station June 9.

AKRON:

The week has been favorable for field work with the exception of about one day, when soil was too wet to work. A rain of .40 inch on Wednesday is a great help but it now develops that more than normal rainfall will be necessary during June to mature even average yields of small grains. Oats and barley are heading as is the August 15 date-of-seeding winter wheat. Generally they do not look thrifty.

Perfect stands of corn and of the sorghum varieties are greatly encouraging. Sorghum plots on the rotations seem to have been depredated badly by squirrels, very discouraging.

Work consisted of the completing of the plowing and packing of the rotation fallow and green manure plots. Forage variety ground for fallow and for Sudan grass was duck-foot cultivated as were the station roadways. Seeding was in progress all week with the bean and soybean variety experiments and with the extra plots on the rate and spacing corn project.

Station south line fence was set back 100 feet during the week and the elevator has been busy constructing the new highway. The prospective view of the station from this highway is better than from the present highway.

Wayne Austin came down early in the week from the College bringing Dean Anderson, who will be stationed here during the summer to assist with Cereal Investigations.

Maximum temperature, 86; minimum, 40; precipitation, .42 inch.

NORTH PLATTE:

Dry weather continued until last night, June 10, when showers totaling .45 inch were received. Grain crops that had been revived somewhat by the showers of two weeks ago were again at a standstill most of this week. Russian thistles were making little growth except on plot margins. Oats on numerous plots will not head out. Most of the spring wheat and barley plots are producing scattered heads. The crop on fallow is doing nicely.

Corn has been thinned and is making satisfactory growth. Rye for green manure was plowed under June 8. The growth was very light. Milo has emerged with satisfactory stands.

COLBY:

This has been a rainy week. During the last eight days 3.29 inches of moisture fell, which is .35 inch above the average for the month of June. Rainfall was recorded on every day but one this week. A regular gully-washer, totaling 1.75 inches, fell June 4. All the other rains were showers of less than a half-inch.

Most of the sorghums which had emerged were either washed out or covered up. Many of the plots which showed good stands before the rain will have to be replanted as soon as the surface dries out enough to permit doing so. Corn was too big to be washed under completely. The small grains have improved considerably since the rains set in. All the winter wheat, oats and barley plots are headed or nearly so. The spring wheat is partially headed. Weeds are making considerable headway in all the small grain plots, as the stands are not very thick and the straw growth is not heavy.

The cleaning of the alleys and roadways was finished between rains. No field work was possible.

President F. D. Farrell, Dean L. E. Call, Regent Wallace, and Director of the Budget, Mr. Graber, visited the station Thursday.

GARDEN CITY:

All planting was finished the past week. Sorghums are up to good stands. Wheat is filling fast. Wheat that is on fallow will produce very good yields. Wheat on continuous cropped wheat land is poor, some a virtual failure.

The rains received during the past week were too late to be of benefit to much of the wheat on old wheat land. However, wheat on fallow was not hurt so much by dry weather and its stage of development was not so far along but that the rains will be of great benefit.

Roadways and alleyways were cultivated with the five-tooth and rod weeder the past week. Early-listed or plowed fallows were worked June 11 with the rod weeder.

Weather conditions the past week have been ideal for sorghums that were planted before the rains. The soil was thoroughly saturated to a considerable depth by 3.04 inches of rainfall that all came in slow, easy manner without run-off.

Maximum temperature, 87; minimum, 53; precipitation, total of five rains, 3.04 inches.

HAYS:

The weather during the week has been generally quiet, warm and damp, with rains on four of the seven days - in one rain, on the 8th, 3.25 inches fell in 30 minutes, much of this being lost except in the fields covered with small grain which retarded the run-off.

All small grains have responded favorably to the wet weather. A little of the wheat on fallow has been lodging but apparently it is not much injured thus far. Winter wheat is from about 12 or 15 inches high on the poorest plots to 36 inches on the best plots, is very well headed and well filled, or filling, and is now in soft-dough stage.

Barley suffered more than other grains from drought which resulted in extremely short growth on some plots, ranging from 12 inches on the poorest to 24 inches on the best; generally short heads, with extremely short heads on the poor plots, but all heads bulging with grain, some of which hardly have room to hang on.

Oats were very slow in forming culms and for a time looked like they would not head, but recently have reached a height of from 18 inches on the poorest plots to 30 inches on the better plots, and have good heads which are in the bloom stage.

Spring wheat is from 24 to 40 inches high and heading.

Hays, continued:

All the spring grains are perhaps a little thinner than in most years because many of the stools have failed to make seed stalks, but the growth is generally very even over the plots and they look very good. The wild buckwheat, previously mentioned as being so thick in the plots, has for the most part been left in the shade by the crops, but it is still there and will be ready to make its crop after the small grains are harvested.

Contrary to the rule for Hays, barley, oats and spring wheat crops are much shorter and poorer on the fall-plowed plots than on the spring-plowed; this is especially true on the continuous-cropping series.

Peas are two feet high, have heavy growth and in full bloom, and will be plowed under as soon as ground is dry enough.

Rains have greatly interfered with tillage work, including planting of row crops. With three large projects depending on one planter for seeding and with only a few days with soil dry enough to plant, no seeding to date has been done on the Dry Land Project. The Cereal and Forage Projects each have some done but not nearly all. The planter will be released to the Dry Land Project after one more day's planting by the Cereal Project, which is now trying to plant.

Maximum temperature, 88; minimum, 55; precipitation, 4.68 inches.

TUCUMCARI:

A beating rain and hail yesterday, totaling .66 inch, injured cotton severely and also buried considerable recently-emerged sorghums. The extent of the damage is not known, but it is probable cotton stands on all but the last date will be deficient. The land is packed and smooth, in ideal condition for soil blowing if wind occurs.

The first two days of the week were devoted largely to breaking crust on unemerged plantings and to harrowing the majority of rotation plots to prevent blowing, for hail and rain at the close of the previous week had crusted the soil and left it in blow condition. It is hoped hail and high winds are about a thing of the past for this summer.

Practically all increase land was planted this week, while all plots are planted except the last date of grain and forage sorghums. After completion of alfalfa cutting the mower was used two days in mowing weeds along fences and roads.

Tucumcari, continued:

Soil moisture is excellent, but farmers are having trouble in securing stands, due to washing and burying of young seedlings. While the totaling precipitation of 6.29 inches for the year to date is practically the average for this period, the distribution has been so favorable that ranges, fields, and trees appear as if it had been unusually high. At present, however, it is the general feeling that dry soil is not much more discouraging than weekly hail storms.

Maximum temperature, 92; minimum, 47; evaporation, 2.163 inches; wind velocity, 5.8 miles per hour.

DALHART:

Due to the fact that the wet weather continued during the week only one day's work (Thursday) was possible in the field. Practically everything that was dry enough to work was disked and harrowed on that day in anticipation of planting starting on Friday. A rain of .70 inch on Thursday night and another of .78 inch on Friday night have made the ground so wet that it will be at least Tuesday before any planting can be done, if it does not rain again. There still remains at least six days' planting. The seed planted in dry soil has been covered quite deep and that which has not now emerged will probably emerge to spotted stands. Rather fortunately the second date of planting of the sorghum varieties is just now emerging to thick stands. Some of the nursery rows seeded by hand will probably have thin stands. None of the rotation sorghum and cowpea plots have been seeded.

Almost all of the row crops seeded the week preceding the heavy rain of the 3rd on surrounding farms will have to be replanted. An estimate now would be that fully 75 per cent of the row crop in the immediate vicinity remains to be seeded. Most of the farmers were unable to work at all in the fields this past week.

E. R. Steen returned Tuesday to assist with the cooperative projects with the Division of Cereal Crops and Diseases.

Maximum temperature, 85; minimum, 48; precipitation, 2.44 inches (precipitation for the past eight days 5.94 inches); evaporation, 1.594 inches; wind velocity average, 5.9 miles per hour.

BIG SPRING:

Station planting, with the exception of the June 15 date varietal planting of grain and forage sorghums and cotton, would have been completed this week if weather conditions had permitted. All of the plots had been planted and an increase field of sumac was nearly finished on June 10. On this night occurred a torrential rain, accompanied by a heavy wind and some hail. During a two-hour period 1.50 inches of rain were received, which caused considerable washing and run-off. Some plants that were up and others that were freshly planted are covered so deep that it is probable that they will have to be replanted. Another rain of shorter duration the following night netted .63 inch. This left the front part of the station grounds submerged in water for several hours the next day.

Hail damage and washing were very severe in some portions of the county. Many farmers report their entire crop lost. Feed crops can well be replanted now with plenty of time for maturity, but cotton will require at least a normal frost date this fall if a crop is to be matured.

Station work during the week has consisted mainly of planting increase sumac and knifing varietal plots. Soil moisture samples were taken on the M. C. milo plots. Other work consisted of harvesting wheat plots and hoeing weeds from fence rows.

Maximum temperature, 94; minimum, 58; precipitation, 2.13 inches.

LAWTON:

Rainfall varying from .36 to 1.06 inches was recorded on four dates during the week, the total being 2.63 inches. Each rain was accompanied by high wind, and a small amount of hail that was not at all damaging fell on one date. Sultry, humid atmosphere, low wind velocity and prevailing sunshine characterized the periods between rains.

Small grain harvest, with the exception of a few oats plots, was completed during the week. Grain that was cut this week was very thoroughly matured and quite dry, and it seems to be withstanding the wet weather satisfactorily. A heavy mold developed very quickly on all of the wheat that was cut about the first of the month and considerable handling and reshocking have been necessary to save the grain. Should present weather conditions become unduly extended the damage to the early-cut grain may be very decisive.

Lawton, continued:

The third planting of the chinch bug resistance sorghum project was made June 8, and the May 15 planting was thinned to a uniform 9-inch stand on the 9th. Sorghums, corn and alfalfa have made an extremely rapid, vigorous growth during the past ten days. Most of the corn is now too large to cultivate, and the second cutting of alfalfa will have to be made at an early date.

Grasshoppers are sufficiently numerous in alfalfa and other grasses to cause some concern relative to cotton injury. Protective measures will undoubtedly have to be employed around experimental plots.

The April 15 planting of cotton is well advanced in growth but later plantings that emerged so irregularly are still quite small.

The rains during the week have delayed some much needed sorghum thinning, cotton chopping and cultivation.

Maximum temperature 93; minimum, 59.

WOODWARD:

There has been 4.57 inches of rainfall over the past 18 days and weather conditions have otherwise been most favorable for the maturing of the wheat crop at the station. In general, this is true of the region represented by the station. Weather has, however, been rather unfavorable for the rapid growth of corn, sorghums, and cotton. Considerable replanting of sorghums and cotton has also been necessary, due to covering by dashing rains.

Harvesting of variety wheat plots was started the latter part of the week. Most of the rotation, variety and field planting of sorghums and cowpeas was completed during the week. Work on culverts, water system, and machine shed was also under way.

Maximum temperature, 91; minimum, 57; precipitation, 2.34 inches.

PENDLETON:

The first part of the week was quite cool. The last two days the maximum temperature exceeded eighty degrees. The wind velocity was low.

The warm weather has increased the rate of growth of the spring grains. The spring wheats are beginning to head. In the cereal varietal trials many of the winter wheats are over five feet tall.

Field work for the week consisted of hoeing weeds in the alleys, roads and fences. The alfalfa hay was hauled in and weighed.

The following are the yields in pounds per acre of six varieties of alfalfa, first cutting.

	6-inch drills	3-foot rows	Average
Grimm	3330 lbs. per acre	3430 lbs. per acre	3380 lbs. per acre.
Ladak	3610 " " "	4170 " " "	3890 " "
Canadian Variegated	3460 " " "	3390 " " "	3425 " "
Turkestan	4430 " " "	3590 " " "	4010 " "
Utah Common	3740 " " "	4650 " " "	4195 " "
Grimm Local	5320 " " "	3800 " " "	4560 " "
Average.....	3982 " " "	3838 " " "	

These are three year old stands. Seed of the first five varieties was furnished by the Division of Forage Crops and Diseases.

Present indications are that good crops will prevail all over Eastern Oregon. The winter wheat appears particularly promising. With a good rain within the next two weeks, spring wheat yields will be very good.

Maximum temperature, 87; minimum, 37; precipitation, none.

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JUN 23 1932
BUREAU OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 13 1932

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING JUNE 18, 1932.

HAVRE:

The past week has again been very favorable. Rain amounting to 1.39 inches was recorded on three days. Total rainfall for June to date 4.37 inches. All crops are making very rapid growth. Early spring rye is headed and other early grains are in the boot. Alfalfa made very good growth especially on irrigated land. Crested wheatgrass is nearing the state of harvest for hay. Alfalfa under irrigation has made a very heavy growth but is lodging as a result of the rains during the week. It will be harvested as soon as weather conditions warrant. Spring grains, especially barley that was well advanced, were partially lodged after the heavy rain of the 15th.

Corn is growing a little slow and is still being injured by the pale western cutworms. The damage to grain crops by cutworms is practically over but the injury is much more severe in this locality than was anticipated two weeks ago.

Native grass is in excellent condition. Several fields that have been abandoned for a few years have a heavy growth of wheatgrass this year. Needle grass is practically headed.

Sweet clover and rye for green manure were turned under during the week. Roadways were cultivated and corn on the plots was given the first cultivation.

Maximum temperatures varied from 68 to 84 and the minimum from 49 to 54. Wind velocity was low and evaporation amounted to .976 for the week as compared with the average for this period of 1.629 inches.

JUDITH BASIN:

Good growing weather has prevailed during the week and most crops made good progress. Corn is emerging very slowly and some reseeding may be necessary. Some damage is still being done by pale western cutworms. Damage on the station has been limited to a few plots on the poorer methods of the rotations. To date the damage done has been confined to a few spots rather than the entire plot and it may still be possible to secure accurate yield data by trimming off the infested areas.

Judith Basin, continued:

Grass and sweet clover have made good growth during the last two weeks and should produce good yields. Alfalfa has made rather slow growth and yields will be light. The small growth may be due to the lack of vigor caused by the extreme drought of the past three years.

Work done during the week has consisted of harrowing corn, cultivation of fallow, cultivating alleys, rogueing mustard out of rotations, building fence, and cultivation in the shelter belt.
Maximum temperature, 81; minimum, 43; precipitation, .39 inch.

HUNTLEY:

All crops have profited by the good growing weather of the past week. Winter wheat is fully headed and a few heads are appearing on some of the spring-sown grains, notably oats and barley. Flax is blooming.

Two good showers early in the week brought the precipitation for June above the average for the month. One rain amounting to .64 inch was torrential in character and much of the moisture was lost by run-off. Some hail accompanied the rain and damaged garden crops to some extent but seemingly did not harm field crops. This shower was strictly local and was not received by communities outside a radius of three miles from the station, according to reports.

During most of the week the fields were too wet for team work but such jobs as replanting by hand "skips" in the corn rows, rogueing grain variety plots, and hoeing were possible. Hogs on the pastures were weighed and the fall pigs removed to the fattening lots.
Maximum temperature, 89; minimum, 47; precipitation, .84 inch.

SHERIDAN:

Mostly fair weather with temperatures slightly below the station average for the period prevailed over the week. Growth of all vegetation continued good. Winter wheat is now fully headed, rye is in bloom, and Trebi barley began to head during the week.

Haying was general throughout this section. The most of the alfalfa on the station, except in mixtures, was cut and some in bulk fields was hauled. Corn and potatoes were harrowed and all late forage crops in plots and some fields for feed, and beans, were gone over with the rotary hoe. Plowing of rotation plots for fallow was attempted the 13th, but the ground was found to be too wet. Plowing was continued, however, on lighter soil, and the rotation fallow and green manure peas and sweet clover were plowed on the 15th and 16th. Peas were heavy but there was

Sheridan, continued:

only a little sweet clover, the heaviest growth and stand of the latter being on the fallow plot in Rotation 135, where sweet clover for hay is included in the rotation. There was a fair crop of sweet clover on the hay plot of that rotation also.

Alfalfa web worms found on the sweet clover the 11th were soon found on other crops also. Sweet corn and vine crops were badly damaged, and much of the latter destroyed, and some field corn in the pasture check plots was damaged. Later in the week the worms were found to be working on the flax varieties, but the damage there has not been great yet. Only light damage was done on some of the alfalfa, but they are quite thick on some of the alfalfa at present. Many alfalfa fields and some other crops in this section have been badly damaged, however.

Soil samples taken yesterday, June 17, showed fair moisture throughout the 6-foot section sampled on spring wheat.

Late cabbage received from Cheyenne was planted the 15th.

H. L. Westover visited the station the 17th.
Maximum temperature, 87; minimum, 43; precipitation, .03 inch.

MANDAN:

Agronomy.

The past week has been cloudy and cool for the most part. The first cultivation of corn was completed early in the week.

All crops are making a splendid growth. A good hay crop is ready to cut, but has been delayed because of cloudy weather.

Cooperative Grazing Experiment.

All pastures continue in excellent condition for grazing, and grass is growing rapidly. The cattle have improved in condition markedly since June 1.

Mandan, continued:

Arboriculture

E. J. George writing from Opheim, Montana, states: - "Some wonderful old plantings in this section. Mandan plantings have risen considerably in the people's estimation since they came through the drought of the past two years so well".

At the Mandan Station the hardwood and conifer nurseries are requiring continuous attention with cultivators and hoes. The weeds are germinating freely and growing rapidly. So far trees of all species are making good progress.

Horticulture

The thinning out of the fruit has been completed. Cultivating, hoeing, and the spraying of the plum trees with a special mixture of soap and Black Leaf 40 to eradicate an attack of plant lice, are the more important details of the week's work.

Vegetables on the whole are doing very well so far. A good stand of all, with the exception of melons, has been secured. Early-planted melons were killed by frost in late May, and seed planted later is up with a very poor stand. Cultivating and hoeing is being carried on as actively as possible.

The grounds are probably looking better this year than for several seasons past. Bluegrass lawns, benefiting by the liberal rains, are in very good condition.

Shrubbery, trees and perennial flowers are all doing remarkably well. At present hybrid rugosa roses, mock orange, and elders are in full bloom. Peonies have been blooming for the last ten days and are still very showy.

L. P. Reitz, Assistant Agronomist, State College, Bozeman, Montana, visited the station on Tuesday, Halldor Halldorson, Deputy Collector in charge, Sherwood, North Dakota, on Wednesday, and some 60 Rotarians from eastern points, who stopped off to see the Mandan Field Station, on Friday.

Maximum temperature, 82; minimum, 48; precipitation, .22 inch.

BELLE FOURCHE:

With the exception of three moderately warm days during the middle of the week, the weather has continued comparatively cool. Light rains have been of frequent occurrence, and precipitation has been recorded every day except one. Two heavy showers, totaling .75 inch were received within a 24-hour period on June 15 and 16. A large amount of run-off occurred, and more or less damage was done to several of the corn and late-seeded small grain plots. A total of 2.43 inches precipitation has been received to date in June, which lacks only .18 inch of equalling the 24-year average for the entire month.

All crops have made very noticeable progress, but development has been retarded in a few of the low spots where water has been standing. Corn and potatoes made pronounced advancement during the three days of warm weather. Barley is heading, and a few heads of oats have appeared. Spring wheat is making a particularly rank growth, and is nearly 18 inches high. Winter rye stubbled-in after winter wheat has attained an average height of approximately four feet. Sorgo is up on most plots with fair stands, but the reseeded alfalfa is emerging very slowly and the stands at present are far from satisfactory.

Conditions have been more favorable for the performance of field work than during any of the previous three weeks. All roads were double disked and duckfooted. Alleyways were cultivated and hoed, and corn was thinned and cultivated. One wheat plot, which was almost completely covered by drifted soil during the heavy storm on May 30, finally became dry enough to work and was reseeded. Replanting on the various other plots was also completed. Alleyways in the low portion of the rotation field were again listed to provide drainage and protect plots from flood water.

Maximum temperature, 86; minimum, 45; precipitation, .87 inch.

ARDMORE:

The week as a whole was cool, and good rains again fell in many parts of the county, but practically none at the field station. Crops are short of moisture, but the cool weather has prevented serious damage. Thursday, June 16, when the temperature rose to 90 degrees, many plots commenced to fire, but more favorable weather later in the week stopped the firing temporarily.

The week was devoted almost entirely to putting up hay and cultivating row crops. All of the hay is now in the stack.

Ardmore, continued:

Grain crops are now heading and most plots are in condition to make a good yield. Unless rain falls soon, however, the prospective yield will be materially reduced.

Corn and sorgo are making slow growth, but are in good growing condition and should progress rapidly with warm weather.
Maximum temperature, 90; minimum, 47; precipitation, .05 inch;
The precipitation for June to date is only .45 inch.

ARCHER:

During the past week the weather has been favorable for the recovery of crops injured by the severe hail of June 10. The maximum temperature was 79 and the minimum 42 degrees. The precipitation was .19 inch.

Winter wheat and winter rye were the crops most seriously injured by the hail of June 10. The rye was in full head and the winter wheat was emerging from the boot. The 25 acres of winter wheat in the east end of the dairy field has been disked with the one-way in preparation for seeding to millet. The other fields and plots were not injured so severely.

The spring wheat, oats and barley have responded to the moisture. Sunflowers were severely cut by the hail but a stand remains. The corn crop has practically recovered but the beans that were up are in bad shape. Alfalfa is starting a new growth and crested wheatgrass, which was in head, is at a standstill. A seed crop of this grass is unlikely. The prairies have greened and pasture feed is fairly abundant.

Work at the station has consisted of plowing and duckfooting the fallow plots, cleaning road and alleyways, replanting tomatoes and other garden plants, cultivating trees, grading the roadway on the east side of the experimental field and disking up winter wheat destroyed by hail.

Director W. L. Quayle visited the station June 18.

NORTH PLATTE:

Weather for the past week was fairly cool with several small showers. A rain of 1.57 inches on the night of the 11th came with such violence that most of it was lost by run-off. To the south of the station, there was more rain and a rather heavy hail. Water coming down the canyons from the south did considerable damage to fences and fields in this vicinity.

Field work for the week has consisted of plowing summer tills, cultivating corn and taking soil samples. On land that was in small grain last season, there is no available moisture below the first foot while after corn there is some in the second foot. Fallows are pretty well supplied at present.

C. S. Salmon, of the Cereal Office, is a station visitor to-day, June 18.

Maximum temperature, 90; minimum, 50; precipitation, .36 inch.

COLBY:

The weather has been threatening rain all week, but none fell until last night when .29 inch was received. There is still a fairly ample supply of moisture in the soil from previous rains this month.

In places where the stand of sorghums on the listed plots was washed under, they were replanted this week. The corn was thinned and cultivated, and the thinning of the surface-planted sorghums is under way. The late-plowed plots were plowed the 16th. All the other fallow plots were worked with the duck-foot, except the one which is worked entirely with the one-way. Myriads of weeds were starting.

The winter wheat is filling nicely. The spring small grains on fallow are very promising, but on the continuously-cropped plots the prospects are not as favorable as the character of the season would indicate. On these plots the stands are thin and uneven.

The service clubs of Colby held their annual luncheon at the station Wednesday. About 60 were present.

Maximum temperature, 87; minimum, 51; precipitation, .29 inch.

GARDEN CITY:

All row crops are up to good stands and making rapid growth. The drag harrow is being used to harrow all plots and break a crust and kill many small weeds just coming up. It leaves the ground in a loose mellow condition and rolls considerable loose dirt down next to the plants.

Thinning will start the first of next week. Wheat on fallow is filling fast and promises to produce some very good yields. Wheat on continuously cropped land is very poor or nearly a failure in many instances. Many farmers have either listed or plowed up their wheat fields since the rains of June 3 and 4 and are planting sorghums on this land.

Wheat harvest will be late this season where combining operations are conducted on account of many fields with thin stands that will not ripen as fast as normal. Weeds are also going to be a factor to contend with where the wheat is thin.

Maximum temperature, 97; minimum, 54; precipitation, .13 inch (in two small showers).

HAYS:

During the week the weather has been partly cloudy, warm and dry, quite favorable for the development of the small grain crops and for drying the soil which has made field work much more efficient.

Winter wheat is well filled and ripening normally; at the present rate binder harvesting could start early next week on the earliest plots. It will be another week before wheat is dry enough for combine harvesting.

Barley is very well filled but the yield cannot be large because of the small size of the heads which were formed before the drought was broken. This crop will be ready for harvest the latter part of next week.

Oats are very even on all plots, some being thicker and some taller, but all look very fine. The oats seem to be filling very satisfactorily and should produce some excellent yeilds.

Spring wheat is not as thick as the other small grains but is of good height, although not as even as other grains. It is well headed and bids fair for good yields.

Hays, continued:

Canada field peas had produced a heavy growth, were well in bloom, when plowed under June 15. The vines had made long growth and the roots were unusually well covered with nodules.

M. F. winter wheat fallow plot was plowed June 15. All corn plots were planted June 14, and sorghum plots the 15th. The date is later than usual for corn but it was the earliest time since the planting season opened that a planter was available when the ground was dry enough for seeding. The seed went into the ground in excellent condition and the corn is coming up to-day, four days after planting.

The last two days considerable ditch work has been done to take care of any more heavy rains that may come too rapidly to get into the ground.

The annual field day was held on the station Tuesday, the 14th, with 200 visitors in attendance; more interest than usual was displayed in the experimental work.

Thursday the writer attended a field day in Russell County, held by the County Agricultural Agent. The program consisted in visiting some extension experimental work on variety tests and tillage methods for winter wheat he is conducting in that county, and a noon-day dinner with a short program following the dinner. There were perhaps 150 or more people present, who displayed considerable interest. The experimental work, especially the tillage work, checks quite closely with the Hays Station work. Because of the presence of two very obnoxious annual weeds in the wheat fields, and of fly, straw worm, and false wireworm, the farmers are displaying more than the usual amount of interest in fallowing a portion of the land for wheat.

Maximum temperature, 94; minimum, 53; precipitation, .01 inch.

TUCUMCARI:

Harvest of a light crop of wheat and rye and planting of the last date grain and forage sorghums and broomcorn comprised nearly the total of actual progress for the week. The remainder of the time all available implements were being used to prevent soil blowing, in an attempt to save crops already emerged.

Tucumcari, continued:

Rain accompanied by some hail fell on June 3, 10, and 13th. In each instance the soil was packed hard and blowing occurred before fields were dry enough to work. Cotton and cowpeas were most seriously injured, but all crops show the effects of hail, soil washing and burying, and of soil movement before the crust could be broken. All fields have now been worked since the last storm and stands perhaps remain on all but the cotton plots and some cowpea plantings, although many sorghums are partly buried, sand-cut and yellow.

Several thousand dollars worth of damage occurred in Tucumcari June 13, for hail stones the size of hen eggs broke many store windows, sky-lights, and damaged auto tops, while many garages were unroofed and roofing on a hundred or more homes damaged.

Wheat growing localities have in most cases been visited by hail recently, but losses were comparatively light, for many of the fields destroyed had insufficient grain to pay for harvesting. The wheat harvested in the county will average from five to ten bushels, while the state production is estimated as of June 1 at 35 per cent of the 1931 production.

K. S. Quisenberry, Division of Cereal Crops and Diseases, visited the station June 17, accompanied by John Carter, Jr., New Mexico A. and M. College.

Maximum temperature, 95; minimum, 54; precipitation, .45 inch; evaporation, 2.727 inches.

DALHART:

Field operations were delayed during the week by a rain of 1.03 inches which fell on Sunday night, June 11. This rain brought the 10-days' rainy period total rainfall to 6.97 inches, which is greater than the total rainfall for any previous June. It was Wednesday afternoon before any field work was possible and Thursday afternoon before any planting was possible. Some of the ground is barely dry enough to till and plant even to-day, June 18. Some increase planting was done on the drier ground on Thursday and Friday. By operating two planters it was possible to seed the rotation and tillage plots to-day, finishing the rotation seeding except for four drilled plots late this evening.

There still remains approximately three days planting of varieties, nursery rows, and cowpea varieties. The early planting was damaged some by blowing sand during the week. It was impossible to stop and do much cultivation as land had to be cultivated previous to seeding.

Maximum temperature, 93; minimum, 53; precipitation, 1.03 inches; evaporation, 2.190 inches; wind velocity, 4.7 miles per hour.

BIG SPRING:

The heavy rains of the previous week caused a large amount of replanting to be done during the present week. The rains came with such force that crops which had recently emerged were completely covered up. As a result most of the week has been devoted to replanting and in attempting to protect that which was not injured by washing. The fields were hardly dry enough to work when the wind started to blow. This necessitated a large amount of cultivation in various forms in a short time in order to prevent soil movement.

The first hot weather of the season was experienced this week when the maximum reached 102 on one day. This is the only day this year when the thermometer has reached 100 or above.

With the exception of some late dates of cotton, all planting was completed this week, that is, it is hoped that the planting is completed. Other work has consisted of trimming some roadways, picking plums and building fence.

Maximum temperature, 102; minimum, 60; precipitation, none.

LAWTON:

Clear, hot, windy weather during most of the week permitted intensive field work. Practically all row crops have been thinned and everything has received thorough cultivation since the early June rains. Sorghums, corn and cowpeas are growing rapidly and vigorously. Corn is silking and tasseling.

Cotton has seldom been in such an unthrifty condition as at present. Humid atmospheric conditions and cool nights, as well as intermittent periods of low temperatures during the day from June 1 to 12, produced a leaf disease that checked and stunted growth and killed some of the plants. This spotted leaf disease resembles Ascochyta gossypii. Specimen plants were sent to the University of Arkansas for identification. Dry weather will likely relieve the present condition.

Some form of root rot seems to be present in the M. C. kafir plots. Dead plants are miscellaneously scattered over this series of plots, but plot G seems to be the most seriously affected.

A very intensive infestation of adult chinch bugs now exists in all corn and sorghum plots. The next generation, which will likely appear by the first of July or sooner, will undoubtedly produce much damage.

Lawton, continued:

Several of the early-maturing varieties of sorghums planted April 15 are heading.

H. N. Vinall, Division of Forage Crops, Washington, D. C., and J. C. Stephens, Chillicothe, Texas, made a brief station call on the 14th.

Maximum temperature, 96; minimum, 54; precipitation, .56 inch.

WOODWARD:

Wheat has ripened very rapidly over the past week and all of it, except some that was planted very late, will be ready for the combine Monday. High yields are not expected because of thin stands, but it is very well filled. Harvesting of all varieties, rates and dates of wheat on the Cereal Project was completed this week.

Sorghums have made rapid growth the past week for the first time this season. The planting of practically all sorghums on the station was completed.

The second crop of alfalfa is very good, due to the frequent rains of the past month. It will be cut the coming week.

Austrian field peas, over which there has been some popular enthusiasm for several years, were harvested with a very low yield indicated. Hairy vetch gave a fair yield. It suffered no winter injury.

The last of the cherries were harvested. The yields were better than usual. A heavier yield of grapes is promised than for several years past. About 60 per cent of grafts made on pecan and walnut trees this spring appear to have been successful.

Salvia greggi, the flowering willow, and bignonia grandiflora are all in full bloom. The glossy buckthorn is making a nice display with its green, red and black fruits appearing all at the same time, as they will continue to do through the summer. One tamarix with flowers of a much darker pink than is usual has attracted much attention over the past two weeks. The daphne cneorum is blooming for the second time this season. This low evergreen shrub seems to be a very valuable addition to the plantings here. The soapberry is pleasing with its clusters of creamy blossoms. The ptelea is loaded with its wafer-like seed. It attracts attention, also, because of its three-parted leaves suggesting a giant clover. The children have harvested the last of the service berries. The yuccas (Candles of the Lord) have been making a striking, dignified show. Anchusa azurea, three feet high, and covered with the bluest of blue flowers over weeks is one of the best herbaceous perennials. Stokesia (Stokes aster) is proving one of the very best for cutting.

Woodward, continued:

K. S. Quisenberry, of the Cereal Office, who has been working on the wheat nursery for a week, left for Amarillo the 16th.

Maximum temperature, 95; minimum 57; precipitation, .48 inch.

AKRON:

The week was favorable for field work and for vegetative growth, the latter because of rains of some consequence over the week-end. Favorable progress was made with the current field work.

H. B. Osland, John Tolliver and Jack Loosli were here during the week to attend to the monthly weighing of the experimental pigs. L. L. Zook, of the North Platte Station, stopped for a brief visit Saturday afternoon.

Maximum temperature, 90; minimum, 48; precipitation, .40 inch.

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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 25 1932

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING JUNE 25, 1932.

HAVRE:

Conditions for the past week were favorable for very rapid development of crops. Early-seeded small grains are headed and those seeded at a medium date are heading. Spring rye is in the bloom stage. Corn is now making fairly good growth. Irrigated alfalfa is being cut. The growth is so heavy that some difficulty is experienced in curing.

Cutworms are not doing serious damage now but reports from some farms indicate that there are places where grasshoppers are very thick and are moving into grain fields. Web worms are hatching and causing a little damage to alfalfa.

Prof. Clyde McKee of the Montana State College, Ernest George of the Mandan Station, and Leroy Moomaw of the Dickinson Station were official visitors during the week. The 4-H Club members of the Rocky Boy Indian reservation and a delegation from the Northern Montana Grain Dealers Association meeting in Havre were station visitors on the 24th.

Maximum temperatures, 71 to 87; minimum, 50 to 61; wind velocity, 3.5 to 7.1 miles per hour; evaporation, 1.627", compared with an average of 1.543; a total of .13 inches of rain was recorded on three days but this did not interfere with field work.

JUDITH BASIN:

Good growing weather has prevailed during the week and all crops have made excellent progress. Winter wheat is heading with prospects of good yields. Flax on corn ground is in blossom and is looking good; on other methods it is very poor, many of the plots being almost total failures at this time. Cutworm damage continues, the most apparent being confined to corn. All corn plots were gone over the first of the week and the vacant spots replanted. Winter rye on the commercial field was harvested with a binder for hay. A duckfoot cultivator was pulled behind the binder and the stubble worked up in good shape. This rye was seeded in winter wheat stubble and was pastured during the fall and spring. The yield is estimated at about 3000 pounds per acre. Sweet clover on the commercial fields is also being harvested with a grain binder.

Maximum temperature, 86; minimum, 47; precipitation, .25 inch.

HUNTLEY:

This has been the warmest week, so far, this season. Corn, soybeans, Sudan grass and sorgo have grown rapidly, whereas small grains have all advanced to the heading stage. Two light showers stopped haying operations temporarily and permitted some necessary cultivation being done to row crops, alleys and roads. The plot of peas in the annual-crop pastures was fenced preparatory to hogging down.

Supt. Moomaw of the Dickinson Station was among the visitors this week.

Maximum temperature, 96; minimum, 47; precipitation, .11 inch.

SHERIDAN:

Fair weather prevailed most of the week and the last four days were quite hot, providing ideal conditions for getting up the hay. All plots of hay have been weighed and hauled, the hay being in good shape for getting weights. The remainder of the hay that is down is being hauled to-day.

Sheridan, continued:

All crops made rapid progress during the week, the growth of corn, Sudan, and millet being especially noticeable. Marquis wheat in the extra-tillage plots and Reward in the varieties are fully headed, with later varieties beginning to head, and other spring grains fully as far along in proportion. Early sown Vaughn barley is in the soft dough stage. Alfalfa webworms continue to do some damage and have spread to other crops. Sheep and hogs were weighed and turned into field peas.

Leroy Moomaw of the Dickinson Station, was a visitor this week.

Maximum temperature, 94; minimum, 47; precipitation, .03 inch.

MANDAN:

Agronomy: The past week has been favorable for all field work. Most of the week was spent in putting up hay. All the Forage Crop plots of crested wheatgrass, bromegrass, alfalfa, and sweet clover have been cut and are in the cock. Feed fields have been cut and part of them stacked. All yields of hay will be high. Small grains continue to make an excellent growth. Wheat is starting to head out.

Cooperative Grazing Experiment: All vegetation continues in the best of condition for grazing. Bromegrass is fully headed out. This has not occurred under grazing for some years past.

Horticulture: Small fruits are beginning to ripen. Strawberries have been picked three times and, while the stands of old plants are rather thin, the yields are fairly good. Premier, Mastodon, and Easy Picker have so far been the best. Juneberries and currants are ripening quite fast; while the latter are poorer than any time before, there is a very good yield of Juneberries.

Bugs are busy and considerable spraying has been done. Aphids, Colorado and Blister beetles seem more abundant than usual.

Vegetables are coming along satisfactorily. Alaska peas have so far yielded 70 quarts from 320 ft. of row. Beets and cauliflower are ready. Sweet-corn is growing rapidly, in some locations showing tassel in the earliest varieties.

Of blooming shrubs the showiest at the present time are golden elder, Japanese lilac, spirea, roses, and mock orange. The varieties Mont Blanc and Mer de Glace of the latter are especially beautiful, presenting a perfect sheet of white with scarcely any green showing.

Arboriculture: E. J. George, inspecting shelter belt plantings in Montana, reports on June 20 that crop conditions suggest bumper crops in the area he has covered. The roads are beginning to dry up and he is making better time; he expected to be in Havre Wednesday night June 22.

The field nurseries continue in very good shape. Hoeing for weeds, cultivating and spraying are being actively carried on. The blister beetles are giving considerable trouble.

Visitors include: H.L.Westover and J.Allen Clark, of the Bureau of Plant Industry, J.R.Dawson of the Bureau of Dairy Industry; S.A.Garner, Supt.Redfield, S.Dak., Station; R.E.Kennedy, State Engineer, Bismarck, N.Dak., with Prof.J.R.Smith Engineering Department, State College, Fargo, N.Dak.; E.J.Taylor, Manager I.H.C. Bismarck, N.Dak., with two officials from the Chicago headquarters. The N.Dak. Agricultural College Extension Division held a Farmers' Field Day at the station June 22. This field day was arranged and supervised by County Agents R.C.Newcomer, Morton County, H.O.Putnam, Burleigh County, and W.H.McNutt, Agricultural Agent, Soo Railroad. Approximately 3,000 farmers were conducted through the various experiment fields during the day.

Maximum temperature, 85; minimum, 54; precipitation, none.

BELLE FOURCHE:

Moderate temperatures prevailed during the fore part of the week but the last four days have been comparatively hot, and strong winds have caused a rapid depletion of soil moisture. Soil samples taken June 20 showed that early seeded small grains had utilized practically all of the available moisture. Small grains have made such a rank, vigorous growth that the heavy precipitation received this spring has not been more than sufficient to meet current needs, and crops are now in a dangerous position. All early-seeded small grains have commenced burning, but corn is making rapid growth. All of the barley, about 75 per-cent of the oats, and 25 per-cent of the spring wheat have headed. Flax is beginning to bloom.

Sugar beet web-worms have become so numerous and have migrated to the plots in such large numbers that more or less damage has been done to all crops. Flax, corn, and potatoes are the only crops on the dry land rotation plots, which are being seriously damaged thus far, aside from three plots of young alfalfa which were completely destroyed in a few hours. The ground is literally alive with worms throughout the field, and the numbers are so great that efforts to control the pest by spraying and spreading poison bait have proven to be almost futile. Considering the millions of worms present, only a small amount of damage has been done to crops on the dry-land field. The outbreak of web-worms appears to be quite general throughout the irrigation project, and a great deal of damage to sugar beets has been reported.

Maximum temperature, 90; minimum, 54; precipitation, .01 inch.

ARDMORE:

The weather continued warm and dry during the entire week with only one shower too small to be of benefit. Grain crops are firing,though most plots are still in condition to make a fair yield under favorable conditions. Corn and sorgo are making good growth. The stands of corn are somewhat uneven due to uneven germination.

Maximum temperature, 94; minimum, 48; precipitation, .07 inch.

ARCHER:

During the past week the weather has been warm and dry. Crops have responded to the warm weather and the rain of June 10, but on June 24 some of the small grain crops in certain rotations began to show the need of more rain. Corn, sunflowers, potatoes, millets and Sudan grass are beginning to grow more rapidly. The spring cereals, for the most part, are in boot and a few early varieties are heading. Winter wheat has headed very unevenly. Only a few of the most favored plots are fully headed after a period of 10 days. Prairie grasses have made a good growth but need more moisture.

In addition to seeding 25 acres of millet, experimental corn and trees were cultivated this week.

Maximum temperature, 80; minimum, 45; precipitation, .03 inch.

AKRON:

Measurable precipitation early in the week maintained the outlook at this station for average yields of the spring-seeded small grains. The rate of seeding proso experiment and the proso and foxtail millet variety experiments were seeded immediately following the rains. The weed problem is quite acute at present. Stands of beans, millets, corn, soybeans, etc., are excellent.

Akron, continued:

J. O. Belz visited the station this week end.

Maximum temperature, 84; minimum, 50; precipitation, 1.02 inches.

NORTH PLATTE:

Very good growing conditions have prevailed during the week. Another torrential rain of 1.38 inches on the 18th brought the total for the month to date to 3.88 inches. The North Platte Weather Bureau reports .66 inch of this rain as having fallen in a period of five minutes. Heavy erosion occurred at several places on the crop rotation fields. The soil was beaten down so that cultivation of all row crops was again necessary, although a cultivation had been completed the previous week. All of the fired grain has again turned green. Some of the most severely injured plots upon which it appeared no heads would be produced are now putting out small heads. The straw is so short, however, that harvesting with a binder will not be possible.

Station visitors included Chancellor E. A. Burnett, and Purchasing Agent L. F. Seaton, of the University, on the 23rd, and J. O. Belz, of the Division of Genetics and Biophysics, on the 23rd and 24th.

COLBY:

A number of showers this week kept the crops growing nicely. Winter wheat is beginning to change color, as is barley. Oats are filling well. Spring wheat on fallow is getting very rank. The other spring wheat plots are rather uneven. Barley, except on fallow, is very short and is not developing very well. Corn is growing rapidly. The sorghum crops are just beginning to grow appreciably. Much of the time has been devoted to fighting weeds which the frequent showers have encouraged. The comparatively thin stands of most of the small grains have resulted in an unusually heavy growth of thistles along the edges of the plots.

On Monday, the 20th, about 175 farmers from this and adjoining counties visited the Station, on our fourth annual Farm Viewing Day. County Agents from the counties in this section of the state each came down with a number of farmers.

Maximum temperature, 87; minimum, 46; precipitation, .62 inch.

GARDEN CITY:

Sorghum thinning on the D.L.A. has taken the entire week and will require another day. With the abundance of moisture available in the soil all row crops are making rapid growth. Weeds are also becoming a serious problem, and it may be necessary to use hoes considerably. The early spring was very dry and germination of weed seeds was held back; now it appears that we are going to have to fight weeds all summer long.

Wheat on fallow looks better all the time. Continuously cropped wheat is getting worse, being thin on the ground, weeds are coming in it fast and many fields look like they will have to be plowed up, without harvesting because of them.

Station visitors were: L. W. Kephart and D. A. Savage of the Forage Division, K. S. Quisenberry, of the Cereal Division, and Mr. Johnson of Hays, Kansas.

Maximum temperature, 87; minimum, 55; precipitation, 1.71 inches; June total to date 4.81 inches; the average rainfall for the 22-year June average, 3.04 inches.

HAYS:

The weather during the week has been generally warm, clear and quiet until Friday since when it has been cloudy at times and threatening. The ground was too wet for field work on Monday and Tuesday and was again stopped Saturday noon by a .52 inch rain.

Considerable ditch work has been necessary, including the return of considerable dirt to the roads and shoulders of plots from which it had been washed and deposited in the ditches on the lower part of the project. This is an operation that must be done about so often on this project to prevent lowering of the ends of the plots on the higher part of the project and the flooding of plots on the lower side.

Alfalfa on the two-year-old sod plot was mown for a second crop. It had reached a height of about 12 inches, growth had ceased, and it was about one-third in bloom. Harvesting of barley plots was commenced this forenoon (June 25). Spring wheat is still very green. It has long heads which with all the moisture should fill well. Oats are perhaps the most uniform in appearance over the project that has ever been noted, are standing well, well headed, and thick enough to make some excellent yields. They are entering the stiff dough stage and the earliest are beginning to ripen. Winter wheat is slowly ripening, is generally well filled and is standing well except on fallow where some is very badly lodged and tangled.

Rust is developing more or less on the small grains, but they are so far along, except the spring wheat, it is not likely to do much damage.

Generally good stands of corn and sorghums were secured and these crops escaped injury from ground squirrels and field mice. Only a small amount of poison bait was necessary this year to satisfy these usually troublesome pests.

The Experiment Station has all commercial field barley now in the windrow expecting to begin threshing Monday. Binder harvesting of the small grains has been started on the Cereal project.

TUCUMCARI:

The weekly Friday storm yesterday varied from the usual in that no hail fell, but torrential rain totaling .98 inch washed fields generously. Most serious damage was done on those plots which had been recently thinned, but the number of plots still partially under water makes actual injury hard to determine at present. Yesterday's downpour was the fourth damaging storm this month. Precipitation for June to date totals 2.83 inches compared with a 27-year-average of 2.17 inches for the entire month. Localities within 150 miles have received much heavier rainfall, ranging from five to eight inches, in many cases, while some portions of this county have had at least twice the June precipitation recorded at the station.

Maximum temperature, 94; minimum, 56; precipitation, 1.10 inches; evaporation, 2.033 inches.

DALHART:

The rainy weather for the month of June continued this week with rains on Thursday night and Friday. The total rainfall for the week is 1.77 inches, for the month of June to date, 8.74 inches, which is the highest precipitation ever recorded in one month here. A large amount of this rain has been lost in run-off, but the soil is saturated for the surface few feet. Considerable soil washing occurred on the plots with the rain of Thursday night. Everything which was planted last week showed good stands

Dalhart, continued:
previous to this rain, but small plants in various places were covered by it so that several skips in the row are expected. The last date of planting of the sorghum varieties is just to-day showing emergence. Complete emergence for these should occur by to-morrow. Listed rotation plots will have more skips due to the covering of the plants after emergence than other plots.

Wheat and rye are ready to harvest and will be harvested as soon as the weather permits.

Maximum temperature, 87; minimum, 51; precipitation, 1.77 inches; evaporation, 1.619 inches; wind velocity, 5.3 miles per hour.

BIG SPRING:

On the night of June 20 a combination of all weather elements that could damage crops, presented itself. A sandstorm of unusual velocity occurred, destroyed thousands of acres of cotton in the county some of which had been worked out twice; later on the same night a heavy rain accompanied by hail covered up considerable young stuff that was just emerging. It is conservatively estimated that 30,000 acres of cotton and feed stuff was destroyed during the night. Although all station fields had been recently harrowed, and sandfurrowed, all cotton varieties, part of the cotton spacing plots, and some in the rotations were destroyed by the sand. A block of recently planted sumac and some increase milo had to be replanted as a result of the blow. Sandfurrowing with cultivators and harrow have required considerable time.

Winter wheat plots were threshed during the week. Yields ranged from 12 to 37 bushels per acre, which are the highest ever obtained at this station. The grain obtained is plump and of very high quality. There was an unusually large acreage devoted to wheat in this county this year; combining is under way at present and many farmers are reporting 20 to 25 bushels per acre.

Maximum temperature, 95; minimum, 57; precipitation, .74 inch.

LAWTON:

Threatening skies, local thundershowers and rains during the week and a torrential rain and windstorm that netted 3.04 inches on the 25th permitted only a minimum amount of field work from the 20th to the 25th. Rainfall recorded each day from the 20th to the 25th totaled 3.72 inches. The total for June now is 6.99 inches. The weekly temperatures varied from 65 to 96 degrees.

A good crop of very fine alfalfa that was cut early in the week is now practically worthless. Sunshine and wind represent the only hope of saving even a part of the hay.

Sorghums, cowpeas and corn continue rapid growth and development under the favorable conditions of moisture and temperature. Although the foliage on cotton is still ragged, plant growth has been very satisfactory the past week. Young squares began forming about June 20 on all varieties planted April 15.

Grasshoppers continue quite numerous and weather conditions throughout the week made attempts at poisoning ineffective, but as yet injury to row crops appears to be negligible. Adult chinch bugs of the first

Lawton, continued:
generation are still very numerous and, injury to the susceptible types of sorghums is decisive and quite general. Sparrows are present in larger numbers than usual this year, and they have done more damage to small grain in the shock than for several years.

WOODWARD:

Precipitation has been recorded on seventeen of the past 30 days, May 27 to June 25, with a total of 7.41 inches. The soil is now so full of moisture later rains have largely run off and the North Canadian river is higher than for years.

Wheat was ready for the combine a week ago, however, due to rains and heavy dews very little progress has been made toward harvesting. That already harvested has given a surprisingly heavy yield considering the thin stand, due to the kernels being unusually large and plump. Yields on rotation plots already cut have ranged from 12 to 27 bushels whereas early estimates placed them at between 3 and 12. Because of the good yield and hoped for increase in price farmers are especially anxious to get to harvesting, but this will be impossible until rains cease. About half the rotation plots have been harvested with the new combine which works with remarkable efficiency.

Over many sections of the country storms have been very destructive flattening wheat and covering listed crops. These destructive storms seem much more frequent in some localities than in others. In 19 crop seasons the station has never experienced one of them - though next week's report may state to the contrary.

A good deal of difficulty has been experienced in keeping drainage ditches on the station open. These were lined with burmuda grass to prevent erosion. The grass catches soil in run-off water, which soon fills ditches.

Due to the long continued rainy spell foliage of trees and shrubbery on the station is unusually luxuriant. The pistache and koelrutaria are still covered with the bronzy new leaves of growing tips and the bald cypress, native of southern swamps, is especially responsive to present weather conditions. One of the handsomest groups of plants for foliage effects are the little-grown sorbarias. There are several species, the most common being S. sorbifolia. This blooms throughout the summer, flowers being excellent for bouquets. The Rose of Sharon came into bloom over the past week. Varieties with single flowers seem to open much better under dry-land conditions than the double-flowered sorts. In fact, seedlings which are very inexpensive are better than the select and more expensive double types.

Work of the week has consisted of planting sorghums, harvesting wheat, cleaning drainage ditches, putting in water and gas lines, painting the machine shed and mowing weeds. It is seldom that the station gets as weedy as at present, but there is no remedy for it until rains become less frequent.

Maximum temperature, 96; minimum, 59; precipitation, 2.73 inches.

NOTE:

"EXECUTIVE ORDER

REGULATIONS GOVERNING SICK LEAVE OR ABSENCE AUTHORIZED BY LAW

The regulations of the several executive departments and independent establishments pertaining to the so-called sick leave of absence now authorized by law shall continue in effect until such time as uniform regulations may be prescribed under the authority contained in Part II, section 215, of the Act entitled 'AN ACT making appropriations for the Legislative Branch of the Government for the fiscal year ending June 30, 1933, and for other purposes,' approved June 30, 1932.

HERBERT HOOVER

THE WHITE HOUSE

June 30, 1932."

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